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QUATREFAGES ON THE PROGRESS OF ANTHROPOLOGY.*

HOWEVER well founded on reason any science may be, it is necessary not only that its truth be demonstrable, but that the reasons on which it is established be made known to the reading public,—to those who are disposed to inquire fairly and dispassionately into the reality of its pretensions,—ere it can be expected to command the assent, or obtain the study of the generality of mankind. And however extensive or however satisfactory may be the data from which the principles of any science are derived, until they are collected and systematically arranged so as to arrest the attention of those who are inclined to engage themselves in abstruse studies, the science itself can hardly be expected to make much way in the learned world. To Professor de Quatrefages, both the science of Anthropology and the learned world in general, are deeply indebted for his invaluable papers in the production of the work before us, which reduces to a complete and intelligible system the abstruse and difficult, and to many the incomprehensible, science of anthropology, embracing, during his investigations, a wide range of topics, and arranging disjointed facts in due order, so as at once to evince their bearing upon the subject. His disquisitions are always able, and his reasonings sound; and although we cannot pledge ourselves to adopt every conclusion at which he arrives, we are delighted to accompany, in the pursuit of this or any other science, so enlightened, so earnest, and so dispassionate an inquirer after truth. Indeed, every student of philosophy, more especially of the highest branch of it, the philosophy of man, must join in a tribute of gratitude to the individual whose ability, whose bearing, and whose energy have been devoted to the production of the very valuable, interesting, and important work, the contents of which we are desirous of bringing before the English public.

Our author, at the commencement of his work, proceeds to the definition of the science of Anthropology, as “The History of Mankind considered from a specific point of view,” *Introd.*, p. 1. This definition may not be considered by some to be in itself very determinate or very satisfactory; but our author’s meaning is more precisely evinced as he proceeds. He subsequently goes on to expatiate on the vastness of the science, as embracing the various human groups; and remarks (p. 3) that, in treating on them, the anthropologist is

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not occupied only by mere physical, but that the intellectual and moral part of his nature equally demand our attention. He inquires, with great justice, at p. 5, "if the study of a plant or of an animal has merited the honourable name of *science*, how can we refuse it to the study of man?" Even in the study of bodies, "according to M. Chevreul, it is necessary to study three groups of properties,—the property physical, the property chemical, and the property organic" (p. 6). "Consequently, Anthropology, which I have already defined, constitutes a special science in every acceptation of the word" (p. 6.)

The first part of the book, which is devoted to an historical survey of the science, commences with (Ap. 1) the first period, extending, since Buffon, until the works of the Ethnographical Society (p. 9). What appears to us to be a somewhat inconvenient plan, has been adopted in placing the table of contents at the end of the work instead of at the beginning, where it would be most useful for reference. There is also a great want of an index to a voluminous and important work of this nature, containing such a vast amount of matter, and in which the different points of consequence, requiring to be referred to, are scattered about throughout the volume. Indeed, of all works, this one seems specially to require an index, as not only useful but indispensable. We venture to hope that both suggestions may be made use of, not only in the future editions in French, through which, we trust, the work is destined to pass: but also in the English edition of it, which we hope to see published shortly, which the work in every way deserves, and which, we feel certain, will be most welcome to a large and intelligent class of English readers.

In the first chapter, our author proceeds to take a survey of the opinions of Buffon, and other high authorities. He here remarks, with equal force and truth, that "when two men arrive at identical conclusions, by ways as different as the linguistic and that of physical examination, one is able to accept their assertions; there is every chance of their being true. Their discordance intimates at once where there are special difficulties, or whatever error has been committed on the part of either, it gives birth to reasonable doubts, and excites new researches,—it is, with them, a means to attain the truth" (p. 16). Buffon, Blumenbach, and certain linguists whom he mentions, he pronounces to be the founders of the science of Anthropology. He places a high value, also, on the works of Dr. J. C. Prichard, who, he says, is essentially of the school of Buffon.

In this part of his work, Prof. de Quatrefages speaks strongly as to the value of the information which anthropology has obtained through the efforts of missionaries, to whose proceedings anthropo-

logists have been thought by some persons, although very erroneously, to be opposed ; while, on the other hand, missionaries have acted very unwisely in not availing themselves of the information, and that of the most reliable and practical kind, obtained respecting the people with whom they desire to hold intercourse, and the best means of doing so, supplied by anthropologists. Our author observes, respecting missionaries in general, that “the missionaries have always followed closely upon travellers, whether geographic or naturalists. Several times they have even preceded them. In the pursuit of their habitual occupations they have often studied men more thoroughly than the most eminent lay travellers. Anthropology owes them much. Whether catholics or protestants, orthodox or dissenters, they appear occasionally to have exerted an energy which has done great service to science. . . . It is mainly to missionaries that we are indebted “for our knowledge of many parts of the world” (p. 25).

And, again, in a subsequent part of his work, he tells us that “the missionaries of all communions have most frequently opened the way to geographic discoveries ; and, thanks to their habitual occupations, they have collected on the subject of man many observations which the most eminent lay travellers neglected to make. More than one of them has lately rendered his tribute to science by important publications” (p. 41).

The history of the science of anthropology is followed up in the second chapter of this work, “comprising the last twenty years.” He here remarks passingly, with equal force and truth, that among travellers “it too frequently happens that they inquire more about a country than its inhabitants, and describe more minutely the mammiferous animals or the birds than they do men. If they are occupied with him, they describe his habitation, his clothes, and his articles of dress, without saying anything about his actual character. This is no less the case, even in our day” (p. 36).

This is, doubtless, more the case with modern travellers than with those of ages gone by. Captain Cook, for instance, enters much more into the character, intellectual and moral, of the natives of distant lands, not before visited, with whom he came in contact, than most if any recent writers have been in the habit of doing. The missionaries have done some service in this respect, but not to the extent which might have been reasonably and fairly expected, considering how directly the nature of their occupation led them to observe minutely and in various ways the character and habits of those with whom they have had to deal.

In the present chapter Professor de Quatrefages gives a summary of works indispensable to the anthropologist, which develop the leading

principles of the science, and which were all of them produced during the present century. We have been rather led to regret, in connection with this part of the subject, that the present treatise has not embraced a review of the productions of the older writers on subjects connected with anthropology, long before it was formed into, or attempted to be classed as a separate science, many of whose investigations and observations are of the deepest interest and the highest value. Indeed, the study of anthropology is, in reality, as old as the days of Aristotle, certain of whose works, as also many of those of Plato, are of great value to anthropologists, although anthropology was not then recognised as an independent pursuit. From his days to our own, all the profoundest philosophical writers have treated more or less on anthropology, especially the writers of the middle ages, to several of whose works allusion has lately been made in this *Review*.^{*} Sir Matthew Hale's great work on "The Primitive Origination of Mankind, considered and examined according to the light of nature," is devoted to the examination of subjects, such as the unity of the species, which have peculiarly of late years occupied the attention of anthropologists. Jacob Behmen, too, whom even Newton delighted to consult, must not be overlooked here. Among writers of this class, however, Des Cartes† and Malebranche deserve especially to be mentioned, as also our own writers Hobbes and Locke. In conjunction with the efforts of travellers and naturalists, the observations upon man in general, more especially as regards his intellectual and moral nature, form a mine of wealth to the anthropologist, which has yet to be explored, and to be worked as well. Among the French writers the President Montesquieu, and of his works his "Spirit of Laws," deserve especial notice. All his legal principles may be said to be based on anthropology, which is, indeed, more or less the case with the greatest and most profound jurisprudential writers, especially Puffendorf and Burlamaqui, thereby at once affording direct proof of the practical value of anthropology to legislators and jurists.

The second section of the chapter now before us contains an account of the formation of different anthropological societies. Speaking of the constitution of that at Paris, he observes :—

^{*} Nos. 23, 24, 25, *On the Localisation of the Functions of the Brain*, etc.

† During a recent visit to Paris, we paid a visit to the church of St. Germain des Prés, the resting-place of the remains of Des Cartes, which is situated near the Institut; and learned with equal surprise and regret that no memorial of any kind whatever—not even a common slab-stone—has been placed to mark the spot where the ashes of this very great and original genius, who has done so much for philosophy in France, are laid. Surely, the Institut ought to do something to rescue from neglect so noble an ornament to the rank of philosophers in their enlightened country.

"Composed at first almost exclusively of medical men and naturalists, it has attracted to its ranks a very large number of travellers, linguists, historians, geographers, and archæologists. If it has to complain of anything, it is that the men who cultivate these different sciences have not replied in sufficiently great numbers to its appeal ; for the more it advances the more it perceives that to study the science thoroughly a man requires to know everything" (p. 46).

Among the societies out of France, he alludes to those of London and Manchester, as also to that at Madrid, which has been for some time nearly defunct, owing to the jealousy and arbitrary interference of the then ruling powers ; while those ruling powers, in their turn, have shared the same fate, and have now as little influence over Spain as is possessed by the Madrid Anthropological Society.—*Sic transit gloria mundi*.

As regards the mode of studying men, our author remarks truly and philosophically :—"Man, as a problem not being understood, and consequently not being able to render us any solution of it, it becomes necessary to inquire among the plants and animals, to investigate the general laws common to all living beings, and to employ them in the solution of the question" (p. 60). This is an enlarged and comprehensive, as well as truly philosophical mode of following up the study of anthropology ; but an important light may be thrown on the nature of man by the observation, not only of beasts and birds, but also of fishes and reptiles, and even of insects and vegetables. The question as to the influence of difference of sex in our own species may obtain extensive elucidation from the observation both of plants and insects. The habits of beasts and of birds will serve also to illustrate many perplexing mooted questions in morals.

In the opening chapter of the second part of this treatise, "man's place among living beings" is discussed at large. It is here remarked that—"In reality man is the only being in whom one meets with the following essential characteristics : 1, the notion of moral good and evil ; 2, the belief in another life ; 3, the belief in beings who are superior to him" (p. 76). On the latter point he, however, subsequently remarks that "in this respect domestic animals are religious, for they readily obey those who influence them with the rod and with sugar" (p. 85). They also render homage to a superior being in the case of man. Indeed, he afterwards observes that "there is no difference between the Negro who worships a dangerous animal, and the dog who crouches at his master's feet to obtain pardon for a fault" (p. 86). And, as he also remarks in another part, "animals fly to man for protection, as a believing being does to his God" (p. 87).

Chapter ii is devoted to the much vexed question, even among anthropologists, of "the unity of the human species." He here re-

marks that "in France, as in other countries, anthropologists are divided into two parties upon a question essentially fundamental, for upon the solution of it arrived at depends very often the mode in which all the others are to be dealt with" (p. 94). He here, however, assumes, somewhat unfairly and unreasonably, as it appears to us, that the dogma of the unity of the species has the direct and positive support of the Bible, the incorrectness of which was pointed out in an article in this *Review** by one of our contributors some time ago, and into which it is, therefore, unnecessary here to enter. Professor de Quatrefages consequently speaks very incorrectly, of the unity of the species as "a dogma supported on the authority of a book which Christians, Jews, and Mussulmans almost equally respect" (p. 95), and as having been for a long time received without dispute; of which, too, as has been several times shewn, there is at least very great doubt. He then proceeds to observe,—“Peyrere, supported principally by the first chapters of Genesis, endeavours to demonstrate that Adam and Eve were the ancestors only of the Jewish nation; that they had been preceded by other men; that the Preadamites, ancestors of all the Gentiles, were created at the same time with the animals, and upon all parts of the habitable world” (p. 95). After that he goes on at considerable length to contend for the monogeneity of our race, although he is liberal enough to remark that “the polygenists are too often accused of impiety. One forgets that the same reproach has been cast upon many other doctrines which are at this day admitted by the firmest believers” (p. 96). He subsequently refers (p. 100) to animals and plants in order to solve the problem. And he afterwards observes, that while “there is a unity of species, the different races are fractions of the unity; or, again, the species is the trunk of the tree, while the races represent the principal branches, the boughs, and the twigs” (pp. 106, 107). In another part he asserts that “a rigorous comparison places it beyond doubt that with man the limits of variation of character are in all respects less extensive than with certain races of animals of one particular kind” (p. 110). And he subsequently informs us that “at the end of so many generations one is obliged entirely to recommence the series of crossings, because the products return to the primitive species, as is the case with vegetables” (p. 122).

“The formation of vegetable and animal races; hereditary and medium (*milieu*); applications to man;” is the title of chapter iii. He remarks here that “man does not himself exercise the selection which he employs in the case of the domestic species; and this explains in part how it is that we have found in his case that the limits of variety are always more restrained than they are with animals. . . .

* Vide *Anthrop. Review* for April, 1867, No. 17, p. 175.

It is not, therefore, surprising that there is nothing between man and man of the distance which separates so many of the races of the animal world" (pp. 139, 140). In another part he inquires—"What is degenerating, unless it be the transformation of one race into another?" (p. 141). In a subsequent page he thus defines the somewhat doubtful and perplexing term of what he terms the medium (*le milieu*):—"With me the medium comprehends the sum total of all the conditions of the empire, where either plant, animal, or man establishes itself, and advances itself to the state of germ, of embryo, youth, and adult" (p. 143). To some, possibly, the definition may appear more perfectly perplexing than even the term itself, and, instead of dissipating, may serve only to complete the obscurity. We believe, however, that, on the whole, it entirely meets the author's meaning; and that no other description could so completely comprehend the condition in question; the perfect accomplishment of which is necessarily a task of great difficulty.

On the general subject of the pursuit of anthropology, and the enlarged and comprehensive mode in which our studies ought to be followed, Professor de Quatrefages admirably remarks that "we can, and we ought to study the history of cultivated vegetables, and of domestic animals, to throw light on our own history. . . . Our orchards, our kitchen gardens, our stables, are the proper laboratories where we should work upon these organised beings, instead of confining ourselves to the materials afforded by the brute creation" (p. 144). He subsequently refers to the great variety in the races of dogs, as illustrative of that in the human species. The study of vegetables he shows to be also very useful in this way.

Chapter iv is entitled—"The primitive cantonnement of the human species—the centre of the human creation." On the subject of this chapter our author observes that "certain facts allow us to conjecture with very great probability, that the centre of the creation of man will be found mainly in Asia, not far from the region at this day occupied by the central part of the structure. Indeed, round about this structure, or upon its flanks, we find the three fundamental types of humanity reunited by their intermediate portions, whether by the fusion of races one with another, or by the primary and very extensive modifications effected by the medium. Round about the same structure are distributed very different languages in vogue at the same time, and representing the three grand linguistic divisions universally admitted" (p. 171).

"The antiquity of the human species" and "fossil man" forms the subject of chapter v. "The peopling of the globe" and "migrations" that of chapter vi. "Acclimatisation" that of chapter vii. And in the eighth

chapter is considered "the origin of man ; man primitive ; man fossil ; the first European originators." Commenting here on the difference between men and monkeys, he remarks,—“The first is a walking animal, and walks upon its hinder members. All the monkeys are climbing animals” (p. 244). This is, however, hardly to be considered as an essential difference in itself, although it may be the result of a difference in their respective constitutions. A difference in habits and manners does not of itself prove a difference in man ; although it proves that their pursuits or their constitutions may have been different, which eventually led to their being different in the former respect.

The third part of Professor de Quatrefages's valuable and comprehensive work treats upon "the general character of the human race." He here observes that, "however incomplete is our actual knowledge, it embraces, nevertheless, nearly the whole of humanity, more or less the most essential groups, and the great majority of the secondary groups. . . . In order to enable the anthropologist to form a correct idea of the nature and the importance of physical peculiarities, and of those which are intellectual or moral, characteristic of the human groups," what we know of the human race is sufficient to qualify us for the pursuit (p. 275). Chapter i of the present part treats on "physical characters." On the subject of "proportions" he remarks that "in all our domestic races, the relative proportions of different regions of the body supply important characters. It is the same with man" (p. 281). On the subject of colour he observes—"With all the anthropologists I attach great importance to the colour of the skin, the eyes, the hair, etc." (p. 284). The eye generally, its vivacity, its brilliancy, its mode of action, doubtless affords a marked indication of character of each kind, physical, intellectual, and moral ; but it may surely be doubted much whether its mere colour is sufficient for this purpose, being dependent on the general complexion of the rest of the frame, which is not certainly indicative in this respect. Indeed, he afterwards states that "the colour of the eyes is not of the same importance as the colour of the skin" (p. 288). But, as we have already hinted, is not the colour of the eyes mainly, if not wholly, dependent on that of the skin ?

In a subsequent part of the present chapter he remarks,—“One is led to ask whether smell (*odeur*) can be a characteristic of race. . . . The senses of savages, more exercised than ours, extend further. They can distinguish smells as we distinguish colours” (pp. 290, 291). On the subject of the trunk and the extremities, he observes that “among the well-to-do and intelligent classes of society, the body is sacrificed to the spirit ; among the necessitous classes it is often sacrificed to industry, and too often to vices, when civilisation alike favours

their development, and affords them the means of gratifying them" (p. 294). He subsequently refers, on the authority of Gratiolet, to "the intellectual youth (*jeunesse intellectuelle*), so remarkable among men who have constantly exercised their minds" (p. 302). We are not quite clear here, however, as to the precise meaning of our author. Does he intend to assert that in old age the mind of cultivated men appears young and vigorous, and in a peculiar degree to retain its force and clearness? Or does he mean us to suppose that the youths of a cultivated race display a degree of intelligence beyond the children of persons not highly educated? These are questions of deep interest to the anthropologist, and of considerable importance to mankind at large, on which we do not now wish to offer an opinion, but hope on some future occasion to see them fully discussed and fairly disposed of.

A fact somewhat damaging to the theories of our friends the phrenologists, and which we commend to their serious attention, is thus stated by our author:—"The brain is not alone in the cerebral case, but it is there with all its coverings (*envelopes*). Now it seems to me but little probable that they should always be of the same thickness, always steeped in an equal amount of liquid, and that the cavities (*sinus*) shall have the same dimensions, etc. On these different points, as upon all others, it is necessary that differences should exist, perhaps considerable, between one individual and another, and very probably also between race and race. No one has as yet made any precise research with the object of ascertaining these differences, and of determining their importance (*valeur*). In the meantime it is evident what this influence is upon the volume of the regions of the brain (*l'encephale*)" (p. 303). It surely, however, would not be difficult, while it is at the same time very important, to ascertain these differences. Experiments for the purpose might be made upon the heads of animals as well as those of men. We may venture to infer, however, that the average difference would be much the same in different heads, so that in the great majority of instances,—in all where some peculiarity does not intervene to cause a variation,—the shape of the skull will be found pretty correctly indicative of that of the brain.

Professor de Quatrefages, however, informs us that "Gratiolet concludes that the development of the skull is, up to a certain point, independent of that of the brain, and that different parts of the region of the brain (*l'encephale*) develop themselves also, up to a certain point, independent of each other" (p. 304). But admitting all this, each part must ultimately attain its full growth and development, and so all these different parts will probably find their proper level at last.

[To be continued.]